UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,084	10/27/2000	Seiji Higurashi	0102/0141	4852

21395 7590 04/30/2004

LOUIS WOO
LAW OFFICE OF LOUIS WOO
717 NORTH FAYETTE STREET
ALEXANDRIA, VA 22314

EXAMINER	
DILDINE JR, R STEPHEN	
ART UNIT	**PAPER NUMBER**
2133	4

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/697,084	HIGURASHI, SEIJI
	Examiner	Art Unit
	R. Stephen Dildine	2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-8 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-8 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 27 October 2000 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Specification

35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "being repetitively completed at a completion period", "being repetitively completed piece by piece", "completed in every unit equal to the completion unit of the error correction code".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform to current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors (e.g., "completion period").

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2-3 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi et al. Applicant's claims 2-3 and 7-8 recite, in a generic information recording system, 1) encryption-resultant information, 2) an error correction code, and 3) decrypting information where the decrypting information is dispersively placed in a portion of either the encryption-resultant information or the error correction code or both. Kobayashi et al. teaches, at the paragraph beginning at column 9, line 58, in a generic information recording, 1) "recording the double-encrypted digital audio signal SC", 2) "with an error correction signal", and 3) "the second key information signal KY2" which is "then subjected to interleave process", which meets the recitations of claims 2-3 and 7-8.

Claims 2-3 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Braitberg et al. Applicant's claims 2-3 and 7-8 recite, in a generic information recording system, 1) encryption-resultant information, 2) an error correction code, and 3) decrypting information where the decrypting information is dispersively placed in a portion of either the encryption-resultant information or the error correction code or both. Braitberg et al. teaches, in a generic information recording, 1) "some or all of the ICM data may be encrypted" column 3, line 26, 2) "error correction code (ECC) data", column 14, line 17, and 3) "or other data used to control access", column 14, line 13, where "it is also possible to embed some or all such data in the ICM area (e.g., interspersed therewith, as part of or along with synchronization or error correction code (ECC) data" column 14, lines 14-17, which meets the recitations of claims 2-3 and 7-8.

Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Owashi et al. Owashi et al. teaches, in an information transmission environment, 1) encryption-resultant information "the desired data requested to be transmitted is encrypted on the basis of the key signal to form main data" column 3, lines 24-26 , 2) an error correction code "The transmitting processing unit 140 performs encryption and addition of an error correction code as necessary" column 6 , lines 10-11, and 3) decrypting information "a key signal is calculated from a predetermined initial value" column 3, lines 22-23, and dispersively placing the decrypting information in a portion of the encryption-resultant information "and the main data is multiplexed with the initial value and a user identifying code so as to be transmitted" column 3, lines 26-28, which meets the recitations of claims 1 and 6.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson et al. Applicant's claims 1 and 6 recite, in an information transmission system, 1) encryption-resultant information, 2) an error correction code, and 3) decrypting information where the decrypting information is dispersively placed in a portion of either the encryption-resultant information or the error correction code or both. Thompson et al. teaches, in an information transmission system, "is used in the show transmission and reception system 100 of the invention", column 9, lines 36-38, 1) "the audio data portion 131a (AD) may be encrypted as will be explained later, to form encrypted audio data AD*", column 9, lines 45-47, 2) "further signal to noise improvement is attained by the use of digital error correction" column 9, lines 41-43, and 3) "Information identifying a prespecified one of the multiple decryption keys (DE-Keys) is embedded in the independent data portion 131f (ID) of each audio frame 131", column 9, lines 51-54, where the decrypting information (decryption keys) "is embedded in the independent data portion 131f (ID) of each audio frame 131", column 9, lines 52-53, which meets the recitations of claims 2-3 and 7-8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-3 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. further in view of Hoffberg et al. Applicant's claims 2-3 and 7-8 recite, in a generic information recording system, 1) encryption-resultant information, 2) an error correction code, and 3) decrypting information where the decrypting information is dispersively placed in a portion of either the encryption-resultant information or the error correction code or both. Thompson et al. teaches, in an information transmission system, 1) "the audio data portion 131a (AD) may be encrypted as will be explained later, to form encrypted audio data AD*", column 9, lines 45-47, 2) "further signal to noise improvement is attained by the use of digital error correction" column 9, lines 41-43, and 3) "Information identifying a prespecified one of the multiple decryption keys (DE-Keys) is embedded in the independent data portion 131f (ID) of each audio frame 131", column 9, lines 51-54, where the decrypting information (decryption keys) "is embedded in the independent data portion 131f (ID) of each audio frame 131", column 9, lines 52-53, which meets the recitations of claims 2-3 and 4-5 except for application of the method or apparatus to a generic recording system. However, Hoffberg et al. shows that those skilled in the art at the time of applicant's invention were aware that information storage is equivalent to information transmission "The present invention, however, is not limited to broadcasts, and instead could implement a system for both broadcasts and prerecorded materials" column 36, lines 58-60.

Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rick et al. further in view of Cooperman et al. Applicant's claims 1 and 6 recite, in a method or apparatus for transmitting information, 1) encryption-resultant information, 2) an error correction code, and 3) decrypting information where the decrypting information is dispersively placed in a portion of either the encryption-resultant information or the error correction code or both. Rick et al. teaches, in an information transmitting method, at the end of paragraph [0020]: "In addition to error correction and redundancy encoding, the paging and traffic signals typically are also subjected to encryption coding prior to performing block interleaving (element 51)". In other words, Rick et al. teaches applicant's claims 1 and 6 with the exception of dispersively placing decrypting information in a portion of either the encryption-resultant information or the error correction code or both. Cooperman et al. teaches, at column 3, lines 45, "The message itself is encrypted which serves to further protect the message, verify the validity of the message, and redistribute the information in a random manner so that anyone attempting to locate the message without the keys cannot rely on pre-supposed knowledge of the message contents as a help in locating it" which would direct one skilled in the art at the time of applicant's invention to disperse decryption information in order to prevent anyone from attempting to locate said decryption information.

Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kobayashi et al. or Braitberg et alas applied to claims 2-3 and 7-8 above, and further in view of Hoffberg et al. Applicant's claims 1 and 6 differ from claims 2-3 and 7-8 in that claims 1 and 6 recite a transmission method and apparatus rather than generic storage. Hoffberg et al. shows that those skilled in the art at the time of applicant's invention were aware that information storage is equivalent to information transmission "The present invention, however, is not limited to broadcasts, and instead could implement a system for both broadcasts and prerecorded materials" column 36, lines 58-60.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kobayashi et al. or Braitberg et al. as applied to claims 2-3 and 7-8 above, and further in view of Masuda et al. Applicant's claims 4-5 differ from claims 2-3 and 7-8 in that claims 4-5 recite a tape storage medium rather than generic storage. Masuda et al. states, in paragraph [0004], "In information processing technologies, there are several types of storage media for storing data. Conventional removable storage media are magnetic tapes, magnetic disks, magnet-optical disks, optical disks, etc., and new storage media are being introduced one after another. The information stored on such storage media may possibly be confidential, and are stored as encrypted data in many cases" which is a teaching of using magnetic tapes as a storage medium for encrypted medium; therefore, one skilled in the art at the time of applicant's invention would have, if desired, selected a known tape recording/reproduction system (such as a VCR system) for the generic system of either Kobayashi et al. or Braitberg et al. in an encrypted data recording system.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kobayashi et al. or Braitberg et al. as applied to claims 2-3 and 7-8 above, and further in view of Bartlett who teaches, in a magnetic tape recording environment "so that the data recorded onto the magnetic tape incorporates redundant data from which the original data can be recovered if there is corruption of the data recorded on tape", column 1, lines 18-21, 1) encryption-resultant information, "In the conventional tape drive, electronic circuitry is provided to encrypt the digital data to be stored,", column 1, lines 15-16, 2) an error correction code, "a C2 redundancy coding processor 301 for employing a second (C2) redundancy coding algorithm to a plurality of data sets; first to fourth C1 encoding processors 302-305 for applying a first C1 redundancy coding algorithm to the C2 encoded data sets", column 6, lines 33-37,and 3) decrypting information "data recovery from the encrypted redundancy coding is initiated in step 808", column 9, lines 31-32. Applicant's claims 4-5 differ from claims 2-3 and 7-8 in that claims 4-5 recite a tape storage medium rather than generic storage, but Bartlett shows that one skilled in the art at the time of Applicant's invention could have chosen, if desired, a magnetic tape recording for the generic system of either Kobayashi et al. or Braitberg et al. in an encrypted data recording system.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kobayashi et al. or Braitberg et al. as applied to claims 2-3 and 7-8 above, and further in view of Park who states at column 1, lines 5-10 "The present invention relates to a copy prevention technology for a digital video system, and more particularly, to a copy prevention method and apparatus for a digital VCR to which encryption is introduced to display a picture only in a VCR internally containing a corresponding encryption code, thereby preventing tape from being copied" which teaches one skilled in the art at the time of applicant's invention to chose, if desired, a magnetic tape recording for the generic system of either Kobayashi et al. or Braitberg et al. in an encrypted data recording system.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Uz shows recording encrypted information on magnetic tapes, Ueda et al. show (see Fig. 1 and their abstract) encrypted data and error correcting codes and key information being recorded, Chou shows storing a header 117 having decryption information, encrypted data and error handling information, Ruben at al. teaches an error correction code 236 for encrypted bytes 228 and a field storing multiple encryption keys for the encrypted bytes, Tucker et al. states at column 3, lines 25-31 "followed by a data field which starts with a framing character and is followed, in any predefined order, by the encrypted identifier, the error correction code, a public decryption key, any other desired data (optional) and ending with another framing character", Sako et al shows parity data plus encrypted data being stored, Yuen et al. shows storage of an encryption key on a magnetic tape, Wen recites in his claim 20 "An intelligent video monitor system as recited in claim 1, wherein the transmitter encodes outputted data with at least one of date, time, messages, error correction codes, image type enhancements and encryption", Seymour et al. shows spreading encrypted information over plural slots,

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Stephen Dildine whose telephone number is 703-305-5524. The examiner can normally be reached on M, Tu, Th, F 5:55 am to 4:25 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. Stephen Dildine
Primary Examiner
Art Unit 2133

R. Stephen Dildine